

Metric Quiz V3 P5

2a) $4.89 \text{ L} = \underline{\hspace{2cm}} \mu\text{L}$

$$4.89 \text{ L} \times \frac{10^6 \mu\text{L}}{1 \text{ L}} = 4.89 \times 10^6 \mu\text{L}$$

b) $3.3 \times 10^{18} \text{ mm} = \underline{\hspace{2cm}} \text{ km}$

$$3.3 \times 10^{18} \text{ mm} \times \frac{1 \text{ m}}{10^3 \text{ mm}} \times \frac{1 \text{ km}}{10^3 \text{ m}} = 3.3 \times 10^{12} \text{ km}$$

c) $56 \text{ kmol} = \underline{\hspace{2cm}} \text{ dmol}$

$$56 \text{ kmol} \times \frac{10^3 \text{ mol}}{1 \text{ kmol}} \times \frac{10^{-1} \text{ dmol}}{1 \text{ mol}} = 5.6 \times 10^5 \text{ dmol}$$

d) $2.2 \times 10^{-45} \text{ g} = \underline{\hspace{2cm}} \text{ ng}$

$$2.2 \times 10^{-45} \text{ g} \times \frac{10^9 \text{ ng}}{1 \text{ g}} = 2.2 \times 10^{-36} \text{ ng}$$

e) $45 \text{ cm} = \underline{\hspace{2cm}} \text{ mm}$

$$45 \text{ cm} \times \frac{1 \text{ m}}{10^2 \text{ cm}} \times \frac{10^3 \text{ mm}}{1 \text{ m}} = 450 \text{ mm}$$

$4.5 \times 10^2 \text{ mm}$

$\approx 450 \text{ mm}$

One prefix
prefix base unit

Two prefixes
prefix base unit prefix

L
g
m
mol

M
k
base unit

d
c
m
 μ 10^{-6}
n

Metric Quiz V4 P3

2a) $4.89 \text{ nL} = \underline{\hspace{2cm}} \text{ L}$

$$4.89 \text{ nL} \times \frac{1 \text{ L}}{10^9 \text{ nL}} = 4.89 \times 10^{-9} \text{ L}$$

b) $3.3 \times 10^{-18} \text{ km} = \underline{\hspace{2cm}} \text{ dm}$

$$3.3 \times 10^{-18} \text{ km} \times \frac{10^3 \text{ m}}{1 \text{ km}} \times \frac{10^{-1} \text{ dm}}{1 \text{ m}} = 3.3 \times 10^{-16} \text{ dm}$$

c) $356 \text{ mmol} = \underline{\hspace{2cm}} \text{ kmol}$

$$356 \text{ mmol} \times \frac{1 \text{ mol}}{10^3 \text{ mmol}} \times \frac{1 \text{ kmol}}{10^3 \text{ mol}} = 3.56 \times 10^{-4} \text{ kmol}$$

d) $2.2 \times 10^{-45} \text{ ug} = \underline{\hspace{2cm}} \text{ g}$

$$2.2 \times 10^{-45} \text{ ug} \times \frac{1 \text{ g}}{10^6 \text{ ug}} = 2.2 \times 10^{-51} \text{ g}$$

e) $85 \text{ mm} = \underline{\hspace{2cm}} \text{ cm}$

$$85 \text{ mm} \times \frac{1 \text{ m}}{10^3 \text{ mm}} \times \frac{10^2 \text{ cm}}{1 \text{ m}} = 8.5 \text{ cm}$$

V2 P5

2a) $4.89 \text{ L} \times \frac{10^9 \text{ nL}}{1 \text{ L}} = 4.89 \times 10^9 \text{ nL}$

b) $3.3 \times 10^{18} \text{ dm} \times \frac{1 \text{ m}}{10^1 \text{ dm}} \times \frac{1 \text{ km}}{10^3 \text{ m}} = 3.3 \times 10^{14} \text{ km}$

c) $56 \text{ kmol} \times \frac{10^3 \text{ mol}}{1 \text{ kmol}} \times \frac{10^3 \text{ mmol}}{1 \text{ mol}} = 5.6 \times 10^7 \text{ mmol}$

d) $2.2 \times 10^{-45} \text{ g} \times \frac{10^6 \text{ ug}}{1 \text{ g}} = 2.2 \times 10^{-39} \text{ ug}$

e) $45 \text{ cm} \times \frac{1 \text{ m}}{10^2 \text{ cm}} \times \frac{10^3 \text{ mm}}{1 \text{ m}} = 450 \text{ mm}$
or $4.5 \times 10^2 \text{ mm}$